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Andrew William Mackie

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MOTOROLA INC

600 NORTH US HIGHWAY 45

ROOM AS437

LIBERTYVILLE, IL 60048-5343

EXAMINER

VO, HUYEN X

ART UNIT

PAPER NUMBER

2655

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 09/986,217 | Applicant(s) MACKIE ET AL. | |
| | Examiner Huyen Vo | Art Unit 2655 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, a computer program. Since computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process without a computer readable medium needed to realize the computer program's functionality. Therefore, the program for processing a structured text stored on a computer readable medium is a nonstatutory functional descriptive material.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Carus (US Patent No. 5890103).

5. Regarding claim 1, Carus discloses a method and a program for processing a structured text stored on a computer readable medium of processing a structured text comprising the steps of: creating, from the structured text, a tokenizer text including simplex constituents constructed in accordance with a predetermined set of tokenized rules of a token pattern knowledge base, each tokenizer rule defining a simplex constituent (*col. 33, ln. 59 to col. 34, ln. 67*); creating, from the tokenized text, a parsed text including complex constituents constructed in accordance with a predetermined set of parser rules of a parser rule knowledge base, each parser rule defining a complex constituent (*col. 33, ln. 59 to col. 34, ln. 67*); and creating, from the parsed text, a processed text including message elements constructed in accordance with a predetermined set of interpreter rules of an interpretation knowledge base, each interpreter rule defining a message element (*col. 34, ln. 23-39 or referring to figure 12 or morphological analyzer 2 in figure 1*).

6. Regarding claim 3, Carus further discloses a method of claim 1, wherein the step of creating the tokenized text comprises the steps of: providing a simplex constituent buffer to store the simplex constituents (*step 82 in figure 7A or referring col. 43, ln. 21-31*); and processing a line of text in the structured text, resulting in a line of tokenized text including at least one token, until all lines of text have been processed (*step 84 in figure 7A or referring col. 43, ln. 32-52*), wherein the resulting tokenized text includes the tokens and simplex constituents constructed in accordance with the predetermined tokenizer rules (*col. 44, ln. 17-32*), and wherein each simplex constituent has a start

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marker applied to a start token of the simplex constituent and an end marker applied to an end token of the simplex constituent (*col. 20, ln. 56 to col. 21, ln. 22*).

7. Regarding claim 4, Carus further discloses a method of claim 3, wherein the step of processing the line of text comprises the steps of: processing the line of text as one token if the line of text matches a line pattern in the token pattern knowledge base, to result in a matched line pattern (*col. 43, ln. 46 to col. 44, ln. 16*); and processing the line of text as at least one word if the line of text fails to match any line pattern in the token pattern knowledge base (*col. 43, ln. 46 to col. 44, ln. 16*).

8. Regarding claim 5, Carus further discloses a method of claim 4, wherein the step of processing the line of text as one token includes the steps of: creating a line-spanning token, which includes the line of text, wherein the start marker and the end marker identify the simplex constituent corresponding to the matched line pattern in the token pattern knowledge base (*figures 7A-D, particularly figure 7C illustrates token lengthening step or referring to col. 43, ln. 12 to col. 46, ln. 53*); creating a full-line token simplex constituent which spans the line-spanning token (*figures 7A-D, particularly figure 7C illustrates token lengthening step or referring to col. 43, ln. 12 to col. 46, ln. 53*); and storing the full-line token simplex constituent in the simplex constituent buffer (*figures 7A-D, particularly figure 7C illustrates token lengthening step or referring to col. 43, ln. 12 to col. 46, ln. 53*).

9. Regarding claim 6, Carus further discloses a method of claim 4, wherein the step of processing the first word token includes the steps of: creating a current token for each word in the line (*figure 2*); processing a first word token which matches a start line keyword pattern in the token pattern knowledge base, to result in a matched start line keyword, a full-line simplex constituent and a stored end marker (*figure 12 or col. 23-26*); processing a word which matches a word pattern in the token pattern knowledge base, to result in a matched word pattern (*figure 12, word matching*); and finalizing the stored end marker (*figure 12, keyword result*).

10. Regarding claim 7, Carus further discloses a method of claim 6, wherein the step of processing the first word token includes the steps of: assigning the start marker to the current token, wherein the start marker identifies the simplex constituent corresponding to the matched start line keyword in the token pattern knowledge base (*col. 21, ln. 47 to col. 22, ln. 2*); creating the full-line simplex constituent corresponding to the matched start line keyword in the token pattern knowledge base (*figures 2 or 12*); adding the current token to the full-line simplex constituent as a start token of the full-line simplex constituent (*the token lengthening process in figure 7C or referring to col. 43, ln. 12 to col. 46, ln. 53*); and saving the stored end marker, wherein the stored end marker identifies the simplex constituent corresponding to the matching start line keyword in the token pattern knowledge base (*col. 24, ln. 33, to col. 25, ln. 49*).

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11. Regarding claim 8, Carus further discloses a method of claim 6, wherein the step of processing the word includes the steps of: adding the start marker and the end marker to the current token, wherein the start marker and the end marker identify the simplex constituent corresponding to the matched word pattern in the token pattern knowledge base (*col. 24, ln. 7 to col. 25, ln. 49*); creating a single-word simplex constituent spanning the current token which corresponds to the matched word pattern in the token pattern knowledge base (*figure 12*); and adding the single-word simplex constituent to the simplex constituent buffer (*the result of the operation in figure 12*).

12. Regarding claim 9, Carus further discloses a method of claim 6, wherein the step of processing the word includes the steps of: adding the stored end marker to the current token (*col. 24, ln. 7 to col. 25, ln. 49*); assigning the current token to the full-line simplex constituent (*end result of in figure 12 or referring to col. 26, ln 44-56*); and adding the full-line simplex constituent to the simplex constituent buffer (*end result of in figure 12*).

13. Regarding claim 10, Carus further discloses a method of claim 1, wherein the step of creating the parsed text comprises the steps of: providing a complex constituent buffer to store the complex constituents (*Token Buffer 17 in figures 2 or 12*); and processing the tokenized text until all possible complex constituents have been created (*the operation in figures 7A-D, particularly 7B-C*).

14. Regarding claim 11, Carus further discloses a method of claim 10, wherein the step of processing the tokenized text comprises the steps of: searching for a sequence of complex constituent input elements that matches one of the predetermined parser rules in the parser rule knowledge base to result in a matched complex constituent input sequence (*col. 34, ln. 10-39*); creating the complex constituent corresponding to the matched complex constituent input sequence (*col. 34, ln. 10-39*); adding a start label to a start token of the complex constituent and an end label to an end token of the complex constituent, wherein the start label and the end label identify the complex constituent corresponding to the matched complex constituent input sequence in the parser rule knowledge base (*col. 21, ln. 62 to col. 22, ln. 67*); and adding the complex constituent to the complex constituent buffer (*the result of the operation in figure 12*).

15. Regarding claim 12, Carus further discloses a method of claim 11, wherein the sequence of complex constituent input elements includes at least one of (a) at least one token (*result of figure 12*); (b) at least one simplex constituent which spans at least one token (*Token List in figure 12*); and (c) at least one complex constituent which spans at least one token (*result in figure 12*).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carus (US Patent No. 5890103) in view of Grefenstette (US Patent No. 6289304).

18. Regarding claim 2, Carus fails to disclose a method of claim 1, wherein the processed text identified and provides an interpretation of the message elements of the structured text for text-to-speech synthesis. However, Grefenstette teach that the processed text identified and provides an interpretation of the message elements of the structured text for text-to-speech synthesis (*col. 9, ln. 1-7*).

Since Carus and Grefenstette are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Carus by incorporating the teaching of Grefenstette in order to audibly present the summarized text to users to verify if the summarized text is the intended message.

19. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carus (US Patent No. 5890103) in view of Wanderski et al. (US Patent No. 6519617).

20. Regarding claim 13, Carus fails to disclose a method of claim 1, wherein the step of creating the processed text comprises the steps of: creating, from the parsed text, a tree structure including a root node, at least one internal node and leaves, wherein the root node dominates the internal nodes and leaves, the root node and each of the

internal nodes in the tree structure have corresponding interpreter functions, and the leaves are tokens of the parsed text; and traversing the tree structure wherein the interpreter functions associated with the root node and each internal node are executed to result in the corresponding message element.

However, Wanderski et al. teach the steps of creating, from the parsed text, a tree structure including a root node, at least one internal node and leaves, wherein the root node dominates the internal nodes and leaves, the root node and each of the internal nodes in the tree structure have corresponding interpreter functions, and the leaves are tokens of the parsed text (*col. 3, ln. 1-25*); and traversing the tree structure wherein the interpreter functions associated with the root node and each internal node are executed to result in the corresponding message element (*col. 12, ln. 1-25*).

Since Carus and Wanderski et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Carus by incorporating the teaching of Wanderski et al. in order to process and optimize queries for intended use.

21. Regarding claims 14 and 15, Carus further discloses a method of claim 13, wherein the interpretation function includes a default function (*col. 15, ln. 30-41 or col. 16, ln. 16-25*), wherein the default function includes concatenation (*Token List in figure 12, empty default tokens are concatenated with tagged tokens*).

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22. Regarding claims 16-17, Carus further discloses a method of claim 13, further comprising a user-specified function to produce the message element (*col. 14, ln. 33-47*), and further comprising an optional post-processor directive to produce the message element (*col. 38, ln. 51 to col. 39, ln. 54*).

23. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carus (US Patent No. 5890103) in view of Wanderski et al. (US Patent No. 6519617), as applied to claim 13, and further in view of Grefenstette (US Patent No. 6289304).

24. Regarding claims 18-19, the modified Carus fails to disclose the method of claim 13, further comprising the step of interpreting tags of an output using a text-to-speech synthesizer, wherein the tags correspond to at least one of (a) the start marker and the end marker in the tokenized text, and (b) the start label and the end label in the parsed text, and wherein the tags are SGML tags. However, Grefenstette further discloses the method of claim 13, further comprising the step of interpreting tags of an output using a text-to-speech synthesizer (*col. 8, ln. 1 to col. 9, ln. 7*), wherein the tags correspond to at least one of (a) the start marker and the end marker in the tokenized text, and (b) the start label and the end label in the parsed text (*col. 8, ln. 1-16 and col. 9, ln. 16-36*), and wherein the tags are SGML tags (*col. 5, ln. 1-8*).

Since the modified Carus and Grefenstette are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Carus by incorporating the teaching of

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Grefenstette in order to determine and play the most probable summarization of the input for the user to verify.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo

September 21, 2004


SUSAN MCFADDEN
PRIMARY EXAMINER